Application of Slab Track Construction Technology in High-Speed Railway Turnout Areas (Post-print)

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Date: 2025-08-04T18:11:21+00:00

Abstract

The construction of slab ballastless track in switch areas is a key core technology in high-speed railway engineering. Through the manufacturing and laying of main-line switch slabs at Zaozhuang West Station of the Beijing-Shanghai High-speed Railway, this paper elaborates on the construction techniques of ballastless switch slab construction surveying, rough laying, and precise laying from the perspectives of construction technology and management, aiming to provide a proven set of construction methods for ballastless switch slab construction in high-speed railways.

Full Text

Preamble

Application of Ballastless Slab Track Construction Technology in High-Speed Railway Turnout Zones

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Abstract Construction of ballastless slab track in turnout zones constitutes a critical core technology in high-speed railway engineering. Drawing upon the fabrication and installation of turnout slabs on the main line at Zaozhuang West Station of the Beijing-Shanghai High-Speed Railway, this paper elaborates on essential construction processes—including surveying, rough laying, and precision laying—from both technical and management perspectives. The aim is to provide an effective and practical construction methodology for ballastless turnout slab installation in high-speed railway projects.

Keywords: high-speed railway; turnout zone; ballastless slab track; construction technology

Note: Figure translations are in progress. See original paper for figures.